

## **SOUND CANCELING SYSTEMS AND METHODS**

### **ABSTRACT**

A system for sound cancellation includes a source microphone for detecting sound and a speaker for broadcasting a canceling sound with respect to a cancellation location. A computational module is in communication with the source microphone and the speaker. The computational module is configured to receive a signal from the source microphone, identify a cancellation signal using a predetermined adaptive filtering function responsive to acoustics of the cancellation location, and transmit a cancellation signal to the speaker.